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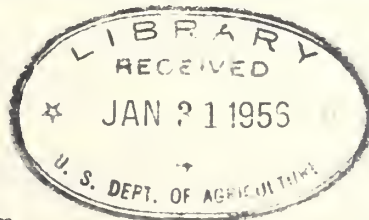
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UNITED STATES DEPARTMENT OF AGRICULTURE  
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THE EFFECT ON SCHOOL MILK CONSUMPTION OF  
A REDUCTION IN PRICE CHARGED TO CHILDREN  
IN SELECTED CONNECTICUT SCHOOLS

This report summarizes the findings and conclusions of one in a series of studies of the Special School Milk Program undertaken by State educational agencies in cooperation with the United States Department of Agriculture, Agricultural Marketing Service. Funds to conduct these studies were made available by the Commodity Credit Corporation to permit the appraisal and development of new and more effective methods of increasing the availability and consumption of milk in schools.

The study was undertaken by the Connecticut State Department of Education in the fiscal year 1955. Supervising the study was Edith M. Cushman, Supervisor, School Lunch Program, Connecticut State Department of Education. Colin White, Assistant Professor of Biometry, and Charles C. Wilson, Professor of Education and Public Health, Yale University, were immediately in charge of the conduct of the study.



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Purpose of Study

1. To determine the effect of specific price reductions on the consumption of milk in certain schools.
2. To determine the effect of price reductions on sales of Type A lunches. The price of milk on these lunches was not reduced.

Procedure for Conduct of the Study

Forty-six public schools in Connecticut were selected for the experiment. They included elementary, junior high and senior high schools in areas with various income levels. Information was obtained from office records and field visits.

The study covered the months of March and April 1955. Consumption records for these months were compared with records for the same months and the same schools in 1954. Sales of both a la carte milk and that sold with Type A lunches were studied.

Until the experiment was undertaken, 15 of the sample schools sold milk at 8 cents per half pint, 17 sold milk at 7 cents a half pint, and 14 charged 6 cents a half pint. These were the same prices charged during the control period, March and April 1954.

By March 1, 1955, each school included in the sample reduced the price by 2 cents a half pint.

In addition, 15 of the 46 schools served milk at mid-morning or mid-afternoon periods as well as making it available at noon.

For background information, the consumption figures for the other eight months of the 1953-54 school year in the sample schools were reviewed for possible seasonal fluctuations which might have a bearing on the study. No fluctuations of any importance were noted with the exception of a considerable drop in consumption for the month of June.

### Conclusions

The two cent per half pint reduction in the price of a la carte milk resulted in an increase in milk consumption, apart from the milk served as a part of the complete lunch, amounting to about 30 percent.

The increase was greatest in those schools that had a previous record of relatively low consumption and served mid-morning or mid-afternoon milk as well as reducing the price.

The study shows that the 2 cent reduction in the price of milk affected each price group, with the greatest effect noted in those schools that dropped the price from 8 cents per half pint to 6 cents per half pint. The least effect was seen in those schools that dropped the price from 6 cents to 4 cents. However, per capita consumption was greatest in the latter schools and least in the former schools.

### Part I - The Effect of Price Reduction on Milk Consumption

In March 1955, the average number of half pints of a la carte milk consumed by each child daily in the 46 schools studied was 0.263, compared with 0.200 in March 1954. This was an increase of 32 percent. In April 1955, each child consumed an average of 0.249 half pints per day, compared with 0.194 in April 1954 -- an increase of 28 percent (Table I).

Table I - A la carte milk consumption in 46 Connecticut schools during the experimental period as compared with milk consumption for the same period one year earlier. (Daily per capita consumption in half pints.)

	1954	:	1955	:	Increase	
					Half Pints	Percent
March	0.200		0.263		0.063	32
April	0.194		0.249		0.055	28

An analysis was made of the relative effects of the price reduction to determine whether consumption increased more with the drop from 8 to 6 cents, from 7 to 5 cents, or from 6 to 4 cents for a la carte milk, (Table II).

Table II - Effect of price reductions on consumption.

Price Charged in 1955	1/	Average Per Capita Consumption :		:	Percent
		1955	1954		Increase
6 cents		0.244	0.172		42
5 cents		0.253	0.188		34.6
4 cents		0.269	0.216		24.5

1/ Every school, during the experimental period, reduced the price by 2 cents a half pint from the level of 1954.

Although the table indicates a higher percentage increase in consumption for those schools which dropped the price from 8 cents to 6 cents, other factors may make this comparison somewhat misleading. For example, those schools which sold milk at the highest price had the lowest per capita consumption in 1954, and thus had greater opportunities to increase consumption. It should be noted also that in both years per capita consumption was highest in the schools with the lowest price.

Fifteen of the 46 schools had a morning or afternoon milk break in addition to reducing the price. The combination of a reduction in price and additional milk service resulted in a substantial increase in per capita consumption for those schools which had had a low rate of consumption in the previous year. It had much less effect in those schools with a relatively high rate during the control period, March-April, 1954 (Table III).

Table III - The effect on milk consumption of additional times of service in schools with a previous low rate of consumption compared with schools with a previous high rate of consumption.

Number of Schools	:	Average Number of Half Pints		Increase	
		:	:	Half	:
		of A La Carte Milk Per Child Per Day	:	Pints	Percent
		March-April 1954	March-April 1955		
Low Consumption					
1954 a/	7	0.117	0.277	0.160	137
High Consumption					
1954 b/	8	0.330	0.350	0.020	6

a/ Seven schools with a per capita consumption of extra milk of less than 0.20 half pints per day.

b/ Eight schools with per capita consumption of over 0.20 half pints of extra milk per child per day.

Furthermore, in schools with a record of relatively low previous consumption, the price reduction in schools having additional times of service resulted in an increase in consumption amounting to 137 percent. This compares with only a 33 percent increase in consumption for those low-consumption schools which reduced prices but offered milk at lunch-time only.

Part II - The Effect of Price Reduction on Sales of Type A Lunches

No significant change in sales of Type A lunches was noted. Sales of milk as a part of the Type A lunches averaged 0.475 half pints per capita in March 1954, compared with 0.466 half pints per capita in March 1955. In April 1954, these sales averaged 0.467 half pints per capita, compared with 0.479 in April 1955. In other words, there was a drop of 2 percent in March 1955 from sales in March 1954, but a 3 percent increase in April 1955 over April 1954. The authors point out that,

"This stability from one year to the next is important in two respects: (a) It indicates that the increase in separate milk cannot be accounted for by diversion of customers from A lunches. This diversion has possibly occurred to some extent in individual schools but, if so, it plays no part in explaining the over-all increase in milk sold separately; (b) the facts are that there is an increase in the sale of separate milk, which had been reduced in price, and no significant change in the sale of A lunch milk, which had remained at the same price."

